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ABSTRACT

AN APPROACH TC A CONTRASTIVE ANALYSIS OF PHCNOLOGIES FOR PEDAGOGIC PURPOSES IS ILLUSTRATED THROUGH THE DISCUSSION OF SELECTED PROBLEMS OF INTERFERENCE WHICH ARISE IN THE TEACHING OF RUSSIAN PRONUNCIATICN TO NATIVE SPEAKERS OF AMERICAN ENGLISH. THE NEED FOR A RECCGNITION CF A HIERARCHY OF ERRORS AND THE IMPORTANCE OF THE PHONETIC LEVEL OF ANALYSIS ARE MADE EVIDENT IN THE DEVELOPMENT OF THIS PAPER. TABLES ARE USED OCCASIONALLY WHICH GRAPHICALLY CONTRAST RUSSIAN-ENGLISH PRONUNCIATION PRCBLEMS. (RL)

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Problems of English Interference in the Teaching of Russian Pronunciation: An Approach to Contrastive Analysis

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The purpose of the present paper is to illustrate, through the discussion of selected problems of interference which arise in the teaching of Russian pronunciation to native speakers of American English, one approach to a contrastive analysis of phonologies for pedagogic purposes. Basic to this approach are the following concepts: (1) *The Need for Hierarchy*. This need is a consequence of what is the primary aim of learning a foreign phonological system—the acquisition of the ability to communicate in a foreign language. This goal of communication entails the recognition of the existence of a "hierarchy of errors," because, although all errors in pronunciation contribute to a foreign accent, they do not all impair intelligibility to an equal extent. The goals of pronunciation would, it is clear, be greater in a course with an audio-lingual orientation than in a grammar-and-reading approach, but the hierarchy of errors would remain the same: highest on the list would be those errors which result in the greatest lack of intelligibility. The factors determining such a hierarchy are complex, and not solely linguistic. A crucial factor is how the native speaker of the target language will reinterpret the errors of the learner. This depends to a large measure upon a cultural consideration: to what extent the accent of the learner is familiar to the native speaker. The fact that most Americans are more familiar with English spoken with a French accent than with English spoken with, let us say, an East Indian accent is one of the important factors whereby a Frenchman with relatively poor pronunciation of English may be more readily understood than a Hindi-speaker with a relatively better pronunciation in English. In setting up the minimal goals of pronunciation training one should take into consideration the degree to which the average Russian is "used to" an American accent. This, then, is an area of contrastive analysis which calls for further research. (2) *The Importance of the Phonetic Level of Analysis*. The immediate aim of learning to pronounce a foreign language should be viewed, from this point of view, as the acquisition of a new set of phonetic habits, and not the acquisition of a

FL 001 472

new phonemic system. In fact, the concept of the phoneme need not play a great role here, since from the point of view of the teaching of pronunciation it is the individual sounds that must be learned. The fact that [i] and [y] are variants of the same phoneme does not mean that the learner can substitute [i] for [y] and still be understood; nor is the substitution of one phoneme for another always the cause of a lack of intelligibility—the Russian hearing *góro*[d] for Russian /górat/ 'city' will understood what is meant.[1] Similarly, we all too often find statements to the effect that Russian *t* differs from English *t* in that the former is dental and unaspirated, while the latter is alveolar and aspirated. Such statements do not take into account the presence of such variants of English /t/ as [ʔ] in *button* ['bə ʔn̩] or [ɾ̥] (a tense single-flap *r*) as in *metal* ['mɛɾ̥l̩] (in those dialects which distinguish between *metal* and *medal.)* The equation of the English phoneme /d/ with the Russian /d/ leaves unexplained why a Russian is very likely to hear an American's pronunciation of *vódu* 'water' (acc. sg.) as *vóru* 'thief' (dat. sg.). It should be clear, then, that a most important prerequisite for effective teaching of Russian pronunciation to speakers of American English is a knowledge of the phonemes and their variants in the dialect of English native to the learners.

Perhaps most critical are those errors which arise from the different systems of word and word-boundary signals *(Grenzsignale)* in English and Russian. These differences can lead to a situation in which a Russian might not understand a Russian utterance produced by an American, even though the linear phonemes (i.e., consonants and vowels) are properly pronounced, since the Russian will not be able to break down the stream of speech into discreet words. The major cause of such a situation lies in the differences between the stress systems of Russian and English. In beginning our discussion of the stress systems we shall assume that the phonetic basis of stress in Russian and English is the same, i.e., relative loudness. (We shall see later that there is strong evidence that such a definition does not, in reality, apply to what we call "stress" in English.)

The basic English stress pattern consists of an alternating series of stressed and unstressed vowels within the word. One of the stressed vowels bears the primary stress.[2] Thus polysyllabic English words have in general more than one stress, cf. *"para'phrase.* Russian words are, on the other hand, marked by the fact that they can contain only one stress, cf. Russian [pərafrás] 'of the paraphrases.' A Russian sentence contains (if one exclude the various enclitics) as many words as stressed syllables,[3] while an English sentence may contain fewer words than stressed syllables. The American who applies his English stress pattern to an attempt at pronouncing Russian *parafráz* will probably say ['parə"fras], which will be interpreted by a Russian as the two words *pára fráz*

'a couple of phrases.' It is to be noted that in the pretonic syllable, in English, there is a strong tendency to reduce /a/ to /ə/. In Russian, on the other hand, [ə] never occurs immediately before the stressed vowel of the word in which it occurs. The presence of [ə] in such a position is therefore a word-boundary marker, reinforcing the incorrect interpretation made by the Russian. Similar interference occurs when a form which is in Russian atonic (e.g., prepositions, particles) receives a secondary stress. Russian *nado vsém* [nədafs'ém] 'above everything' becomes, with the secondary stress an American would naturally use, ['nadə"fs'em], i.e., *nádo vsém*: 'everybody has to.'

The effect of the stress upon the reduction of vowels has been noted above. There is a further complication. Pretonic /ə/ in many Northern dialects of American English is a highly unstable vowel which tends to be lost in normal rates of speech if the resultant cluster already occurs. Forms such as /pə'liɨs/ 'police,' /gə'raž/ 'garage,' and even /sə'poʏzɨŋ/ 'supposing' are commonly pronounced, according to the above rule, as /'pliɨs/, /'graž/, and /'spoʏzn̩/. In the same dialects (basically in the North) /ə/ is also lost in allegro speech in instances where the resultant clusters did not already occur. (Often these resultant clusters are identical with Russian clusters which traditionally present great difficulties for American students. Examples are English allegro forms /'pteɨdə/ 'potato,' cf. Russian *ptíca* 'bird'; /'dvižn̩/ 'division,' cf. *dva* 'two'; /'ktæstrəfiɨ/ 'catastrophe,' cf. *kto* 'who'; /gnəɨt/ 'good night,' cf. *gnát'* 'chase'; /'mgnifisn̩t/ 'magnificent,' cf. *mgnovénie* 'moment'; /'fsilidiɨ / 'facility,' cf. *vsë* 'everything'; etc. Such allegro pronunciations could be utilized by the language teacher to introduce the Russian words with similar clusters.) The danger exists that when the student acquires greater fluency in Russian and increases his rate of speech he will apply his native, English patterns, rather than the patterns of Russian allegro speech, to which he has probably never been introduced. Applying English stress patternings, Russian *golová* 'head' becomes ['galə"va], which in turn becomes in allegro speech either ['gal"va] or even [gəl'va]. The Russian pattern would be: [gəlavá] → [glavá]. This is also the reason for such apparently perverse errors as ['dvat'] for Russian *davát'* but [də'va] for Russian *dvá*.[4] These factors make it likely that an increase in fluency may result in decreased rather than increased intelligibility.

There is a reverse side to the above. Rather than dropping a [ə] which is the result of the reduction of [a], the learner may insert [ə] to break up what is an inadmissible cluster in normal (non-allegro) English. Here are two potential sources of interference: (a) an inserted [ə] will have the same treatment as unstressed Russian /a/ and so *v Nílе* 'in the Nile' and *vaníli* 'vanilla' (gen. sg.) become pronounced by the American identically as [və]*nílі*; or (b) the

epenthetic vowel acquires a secondary stress as when *mgnovénie* "moment" is pronounced ['mɪgnə]*vénie*, which would probably sound to the Russian as a nonsensical **mygno ven'e*.

Inseparably bound with the stress system of English is what has been called *plus juncture*.[5] For our purposes, plus juncture can be viewed as a distinctive syllable division. The phoneme immediately before plus juncture appears as if it were the variant of word final position and the phoneme immediately following plus juncture as if it were word initial. The occurrence of plus juncture and secondary stress seems to be somehow connected, one definite correlation being: "Between a primary stress and a secondary stress there is always at least one /+/."[6] In the examples given above, the presence of plus junctures was most likely conditioned by the stress patterning (i.e., the Russian forms were interpreted as *'para+"fraz, 'nado+"vsem, 'golo+"va, 'mgno+"venie)*. There are also instances where the secondary stress is conditioned by the presence of a plus juncture. In English, plus juncture is used to separate a clearly meaningful prefix from the stem. This can be seen from a comparison of *re'act* with *re+act* (to act again), *recre'ation* with *re+creation* (creating again), etc. There is a tendency for this pattern to be carried over to Russian and a plus juncture is often inserted between a prefix and root. This occurs after the student has learned to recognize prefixes as such and explains why he will pronounce *lovit'* 'to catch' as [lə"vit'] (without secondary stress and with reduction of Russian /a/ to [ə]) while *razbit'* 'to shatter' will be ['raz+"bit'].

One of the clearest tendencies in modern American English is to generalize the stress on the initial syllable of the word. As was seen above, in the North this is often accomplished by reducing pretonic vowels to /ə/, which then is lost. In many dialects of the South a different tendency is at work. Here the tendency is to shift the stress to the initial syllable whenever possible. In such dialects *police* will be pronounced /'pou̯liːs/. The consequences for contrastive analysis should be clear: speakers of such dialects will tend to transform Russian *porúčik* into ['pou̯ruu̯čik], while in the North the same word would become ['pru̯čik]. This means that contrastive analysis must proceed from the analysis of the *dialect* of the students being taught, not from a "general American" nor from any diasystem. This analysis must further take into account the changes or transformations which occur in going from a normal speech rate to a slow rate (representing the speed the learner will use in attempting to speak Russian in the earlier stages) and those which occur in going from the normal rate of speech to an allegro rate.

Up to now the assumption has been made that Russian and English stress are phonetically the same; the only difference, it was assumed, lay in the systems of patterning. There is much evidence to indicate that the relationship between stress and pitch in English

is anything but simple, and that, within English, one may be interpreted for the other. So Joos says, "Another experience that we teachers of English phonemics have all had is that our pupils at first mishear high pitch as maximum stress."[7] A related problem is why Russians hear initial stress when the American speaker of Russian insists he is using final stress. An example of this is the pronunciation of *xorošó*, which a Russian may hear as /xárašo/. In such cases the speaker has often, in fact, had the greatest relative loudness on the first syllable, but the last syllable had a most perceptible rise of pitch: ['xərašó]. On the other hand, an American hearing a Russian pronounce *molokó* 'milk' with citation-form intonation might reproduce the word as [mə'lákou̯], interpreting the rise of pitch anticipatory to the final stress as the stress itself, i.e., Russian [məlakó] → [mə'lakou̯]. There is reason, therefore, to suspect that in certain dialects and/or styles of speech the English "stress" may in reality be a definite rise (or, perhaps, change) in tone, which may or may not have a concomitant increase in loudness. It would seem that in such dialects the position of greatest loudness may vary stylistically between the initial syllable of the word and the syllable with the distinctive rise in tone. The interference from such a pattern is seen most strongly in those Russian words, like *xorošó*, which have a stress pattern of the type XXX.... These show a strong tendency to be reinterpreted by speakers of American English as 'XXX or ˈXXX. (Similar variation is seen *within* American English; nouns with a stress pattern XX"X... have variants of the type "XXX...: *Portu"guese* or *"Portuguese, aba"lone* or *"abalone, ciga"ret* or *"cigaret, Cali"fornia* or *"Californi*, etc.[8] Often the native speaker hears no difference between the two types, especially since the vowel from which the stress has shifted does not undergo reduction to /ə/. The same patterning is then carried over to Russian words of the type *xorošó, golová, erundá*, etc.)

The stress system and its concomitant vowel reduction patterns do not form the totality of the Russian *Grenzsignale*. Among the other demarcational signals, the neutralization of voice oppositions word finally should be mentioned. A clear example of a loss of intelligibility due to the failure to devoice a final consonant is the following phrase, *mnógo sadóv i párkov* "many gardens and parks," which was pronounced [mnógə sadóv i párkəf]. The absence of devoicing of the final *v* of *sadov* (concomitant with a general lack of distinction between Russian [i] and [y]) served as a negative *Grenzsignal;* it marks the absence of a word boundary. As a result, the phrase, as pronounced, would probably be interpreted as the nongrammatical *mnógo sadóvyj párkov*.

It is the contention of this paper that the errors which can be grouped into the general category of "errors resulting in an incorrect assignment of word boundaries," and which are connected most intimately with differences in the systems of prosodics of the two

languages represent possibly the most grave type of interference. Such errors are all too often present even in students who have had three and four years of college Russian. Even if the student were to pronounce all the "segmental phonemes" of Russian correctly, the presence of the type of errors discussed above could severely hinder communication.

The major problem in the vocalism, the lack of proper reduction of unstressed vowels, has already been discussed in connection with the stress. At this point, though, it should be noted that the interference generally ascribed to *okan'e*, *ekan'e*, etc., in the learner is really due to the presence of secondary stresses which tend to be concomitant with a full vowel in English. If Russian *storoná* 'side' were pronounced [storo'na], with only one stress, the Russian would interpret it correctly, just as he understands the speech of fellow-Russians from the North. But the American tends to say ['xoʊ'roʊ''ʂoʊ], with clear secondary stresses.[9]

It is especially important to know the phonetic nature of the vowels of the learner's dialect. Although most Americans pronounce *moon* as /muʊn/, there are dialects in which it is pronounced /miʊn/. This sound [iʊ] is then transferred to Russian for the Russian /u/, and a word like *lunā* 'moon' may be realized as ['liʊna]. In other dialects certain phonemes may be absent or have defective distributions. A comparison of the vocalic inventories of the two languages (for English, the author's dialect is chosen) will show that the larger system is found in English:

Russian

	Unrounded			Rounded	
	Front	Back		Front	Back
High	/i/		High		/u/
Mid	/e/		Mid		/o/
Low	/a/				

English

	Front	Central	Back
High	/ɪ/	/ɚ/	/u/
Mid	/e/	/ə/	/o/
Low	/æ/		/a/

	Front	Back
High	/ɪi/	/uʊ/
Mid	/ei/	/oʊ/

(Some linguists regard the homorganic diphthongs as unit phonemes.)

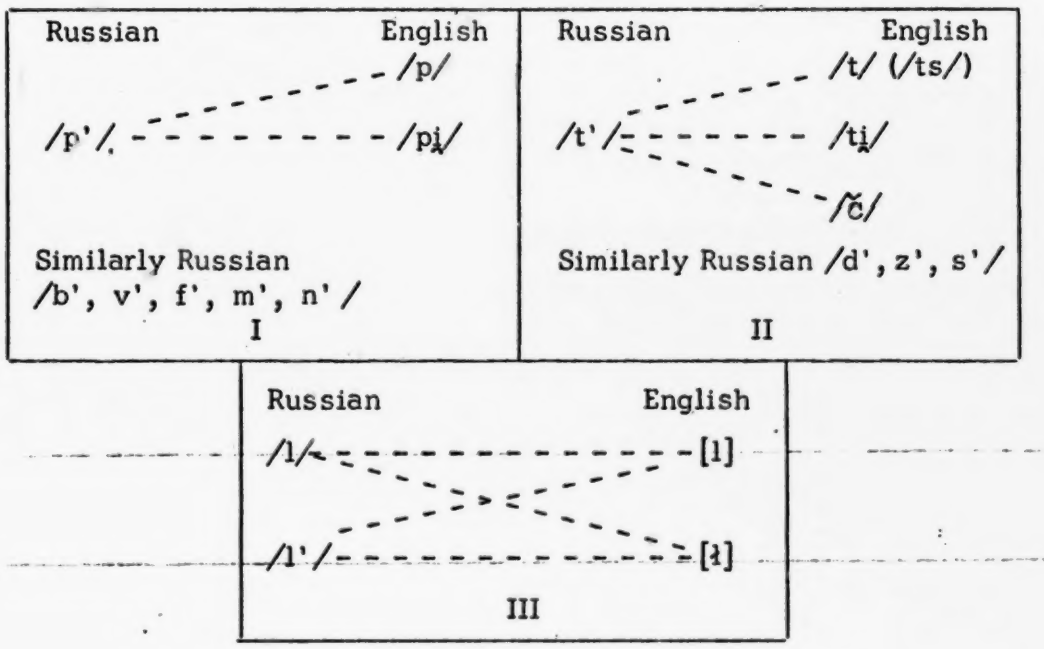
A concomitant feature of the smaller vocalic inventory of Russian is that the domain of variation of a Russian vowel is greater than that

of an English vowel phoneme. In Russian the phonetic variation of the phoneme gives additional, redundant information about the surrounding consonants; in English, it is often the consonant which gives additional information about the nature of the following vowel. Examples of the situation in English are: [ḱ], [ǵ], [č́], [š́], [l], etc. occur before front vowels, while [k], [g], [č], [š], [ɫ], etc. occur before back vowels. In Russian, non-distinctively fronted vowels occur in the immediate vicinity of palatalized consonants: the presence of [æ], [ę], [ö], [ü] signals that the vowel is surrounded by palatalized consonants. These facts can be utilized in teaching the American to speak Russian. The use of English /æ/ in Russian, between soft consonants would give the hearer additional information, and would thereby decrease the danger leading to a loss of intelligibility. The major difference between the phonetic realizations of the Russian and English phonemes lies, probably, in the lack of distinctive rounding in the English vowels /u/ and /o/. Such vowels never occur with the degree of rounding inherent in Russian /ú/ and /ó/, and are sometimes almost completely unrounded. English /bul/ 'bull' may sound to a Russian more like his *býl* than like a possible Russian *búl*. The diphthong /uu̯/ in English is generally more rounded than English /u/, but if it is substituted for Russian /u/ before syllable final /l, l', r, r', j/ the danger exists that the resultant form will have an extra syllable due to the insertion of [ə] after the diphthong. Russian *dúl* 'he blew' can become in this fashion ['duu̯ɨɫ] or ['duu̯əl], homophonous with English *duel;* the imperative *duj* blow' may become homophonous with English *Dewey*, etc. The same situation obtains for the other homorganic diphthongs. Perhaps the most important vocalic distinction is that between Russian [i] and [y]. Although these are variants of one phoneme, /i/, for pedagogical purposes they must be regarded as separate sounds. This is because Americans will hear the difference between Russian *bít* ([b'iɨ], /b'ɪl/) 'he beat' and *býl* ([bɨɨ], /bɪl/) 'he was' in the vowels and not in the consonants. It is for this reason that such learners will be more likely to omit palatalization before /i/ than before any other Russian vowel. But this lack of palatalization will not cause a major interference in communication if the opposition between [y] and [i] is properly maintained. (This is another example of utilizing what is redundant in the Russian phonological system to increase the probability of the American being understood.)

In unstressed position Russian distinguishes only three vowels: /i, u, a/. Assuming that the American speaker can get the proper "rhythm" of the Russian reduction, there is still a strong possibility that the *qualitative* nature of his reduction will be wrong, because in English unstressed /i/ and /u/ tend to be in stylistic variation with unstressed /ə/. Compare *mystery* with [mis]*terious* or [məs]*terious*, *super* with [sə]*periority*, etc.

The contrastive analysis of the consonantism must be carried out on both the paradigmatic and syntagmatic levels. (There are two levels of syntagmatic analysis which must be studied. The first treats the distribution of the variants ["allophones"] in the spoken chain; the second—the distribution of the phonemes themselves in the spoken chain. For pedagogical purposes it is generally simplest to treat these two levels together.)

On the paradigmatic level the greatest interference is generally seen as coming from the presence of a series of distinctively palatalized consonants in Russian and the absence of similar series from English. The basic patterning of the interference can be viewed as the following:



(The patterning of the velars causes no difficulty and the problems presented by /r'/ cannot be separated from the very question of Russian /r/.) In pattern I the plain consonant tends to occur word finally, preconsonantally, and before /i/, while the sequence with /i̯/ tends to occur before Russian /e, a, o, u/. In pattern II the distribution of the plain and jotated forms is as in the first pattern; however a palatal (English /č, ǯ/ for Russian /t', d'/, less frequently /š, ž/ for /s', z'/) may be substituted instead, in all positions. This substitution of a palatal tends to be more common than the separation of the element of palatalization into /i̯/, especially since, in English, sequences of the type /ti̯/ have the pattern of becoming /č/, etc., in sandhi positions such as in *can't you*, *did you*, etc.

Russian /t'/ and /d'/ may also be interpreted as English /ts/, /dz/. This is most likely word finally and preconsonantally. Such an interpretation is due to the maximalization of the Russian oppositions /t/:/t'/ and /d/:/d'/ in the speech of many speakers of Russian by affricating the palatalized member of the opposition, yielding [c'] and [ʒ']. It is for this reason that the palatalization of Russian *c* before *e*, due to interference from the Russian system of orthography, can cause serious misunderstanding. A pronunciation [c'él] for Russian *cél* will be interpreted as *tél*, [c'éx] for *céx* as *téx*, etc. The third pattern applies only to the Russian opposition /l/:/l'/, where the distribution of the two variants of English /l/ does not correspond to the Russian.

The failure of American students to palatalize properly presents special dangers only in those environments where palatalization is distinctive. Before /e/ the opposition between palatalized and non-palatalized consonants is neutralized, and so, in a hierarchy of errors, the lack of palatalization by the American in this environment is not a very critical mistake. In fact, a false reinterpretation of the Russian palatalization in this environment can lead to graver errors than the absence of any attempt at palatalization. The two examples which follow illustrate this:

Russian:	Reinterpreted by the American as:
/t'ém/ 'that' (instr. sg.)	/čem/
/abab'é/ 'about the bean'	/aba' bje/

Which the Russian may hear as:
čém 'than'
o bab'é 'about the peasant women'
(from nom. sg. *bab'ë*)

There remains the problem of the Russian consonants which for one reason or another can be said not to have equivalents in English. These fall into three categories: (1) Sounds which do not occur in English and for which there is no readily fillable slot in the English phonological system; belonging to this category are Russian /x, r, r'/. (2) Russian unit phonemes which correspond to English sequences of phonemes, i.e., Russian /c/, which is to the American student /ts/. The problem here is basically syntagmatic—to produce the already familiar sequence /ts/ in environments (e.g., initial) where it does not occur in English. (3) The variants of the English phoneme do not correspond to the variants of the Russian. This is true in various ways, depending upon the dialect of English, for English /t/, /d/ vis-à-vis Russian /t/, /d/. Intervocalically post-tonic English /t/ may have the variant [r̥] (a tense single flap), as in the dialects of those who distinguish *metal* from *medal*, or may be completely missing as in the dialects of those who pronounce

the two words alike. Before /n/ (and in some dialects /l/) English /t/ has the variant [ʔ] (glottal stop) as in *button* or the New York pronunciation of *bottle*. In some speakers, the glottal stop may also occur finally in stylistic variation with unreleased [t̚]. English /d/ may have the variant [r] (a lax single flap) intervocallically. This may represent also the result of the neutralization of the /t/:/d/ opposition. If these variants are used by the learner in speaking Russian, it is very likely that his intelligibility will be severely impaired, and forms like *mú*[ʔ]*nyj*, *kó*[ʔ], *pá*[r]*at'* will probably not be interpreted as *mútnyj* 'turbid,' *kót* 'tom-cat,' *pádat'* 'to fall.

The problem described last can serve as a transition between the paradigmatic aspects of the consonantism and the syntagmatic. On the syntagmatic level, the major problem lies in the difference in the types of consonant clusters permitted in the two languages. Some of these problems have already been discussed in the sections dealing with stress.. Here we should note that in normal American English there are more (and more complex) consonant clusters word finally than word initially. Russian tends to have more (and more complex) clusters initially than finally. But in more rapid styles of American English, there is a striking simplification of final consonant clusters (concomitant with an ever-increasing complexity of the initial clusters, due to the loss of unstressed /ə/ in initial syllables). Even in normal rates of speech *months* tends to be /mənz/ and *texts*—/teks/. The danger is that these patterns of simplification might be carried over into Russian. A student who pronounces English *most* as /moʊs/ is likely to pronounce Russian *móst* 'bridge' without a final /t/. Similarly, when the learner begins to accelerate his rate of speech, Russian *otéc* 'father' may become /at'és/, just as English /ʍəts/ becomes /ʍəs/ *(what's)*.

The use of American English intonation while speaking Russian seldom results in a lack of communication, so problems of intonation should occupy a different level in the "hierarchy of errors" from some of the errors described above. However it is interesting to note that the sources of interference between the intonational systems of the two languages are twofold in nature: (a) the usual difference in intonational patterns between the two languages, and, (b) a cultural factor—the variations in voice pitch found in Russian intonation are much greater than those found in English; Russian intonation will sound exaggerated, "funny" to the learner, and he will avoid imitating it, so that he himself will not sound "funny." (Another difficulty in teaching Russian intonation to American students is due to the fact that, unlike the segmental phonemes and stress, intonational patterns are not marked in Russian orthography or in beginning textbooks.)

The above discussion has attempted to throw light on some of the areas of Russian pronunciation which, due to interference from the English phonological system, are likely to result in the American

learner's not being understood. The list of errors is not exhaustive, and different types of errors will occur depending upon the dialect of the students being taught. This approach is basically etiological, the basic assumption being that mistakes in pronunciation cannot be corrected unless both the teacher and the student are aware of their causes. Acquiring a new phonological system is just as much a process of "unlearning" as it is of learning, and the student must know exactly what he is to "unlearn." Finally, it must be emphasized that errors do not exist in isolation. There is a clear correlation and interrelation between the various parts of any system. In phonology, an error by the student in the pronunciation of a Russian consonant can cause an error in the pronunciation of the following vowel, which in turn can cause errors in the stress system.

Notes

1. Phonetic transcriptions are enclosed in square brackets and phonemic transcriptions in slants. Orthography (and transliteration from Russian) are italicized. In some instances only the relevant part of a work is given phonetically and the remainder is in transliteration. The following should be noted about the symbols used: The main stress of English words (and Russian forms pronounced with the stress system of English) is marked by " if there is also a secondary stress (') and by ' if there is no secondary stress. Stress is not marked on monosyllables. The acute (´) marks stress in Russian but a rise in pitch in English. A modified phonemicization of English is used. /ɚ/ represents the vowel of English *bird* (/bɚd/) in the pronunciation of Chicago. /i̯, ɚ̯, u̯/ represent the initial sounds of *Yale, rail,* and *wail* respectively, as well as the non-syllabic elements of diphthongs such as *buy, bar, bough* (/bai̯, baɚ̯, bau̯/). Syllabic consonants are marked by a subscript ̩ .

2. Many American linguists operate with a set of four distinctive degrees of stress for English. For the purposes of this paper it is sufficient to equate the Smith-Trager primary stress (´) with ", to equate their secondary and tertiary (ˆ and ˋ) stresses with ', and their weak stress with our unmarked syllables. See G. L. Trager and H. L. Smith, Jr., "An Outline of English Structure," *Studies in Linguistics; Occasional Papers,* III, (Washington, D.C.: 1956), 35 ff.

3. Secondary stress is found in Russian in certain compounds such as *samolètostroénie, dàl'nevostóčnyj, sùperobolóžka,* etc., although in many cases such a stress is facultative. Since Russian words with a secondary stress tend to be in technical terms, both native and borrowed, and are most unlikely to turn up in the first two years of Russian learning, the presence of such a secondary stress in Russian can be ignored in the initial stages of teaching. See also Р.И. Аванесов, «Фонетика современного русского литературного языка» (М.,1956), стр.. 84-87.

4. *Davát'* presents relatively little difficulty to the learner, and therefore can soon be pronounced according to the allegro pattern. An initial sequence /dv/ as in *dva* however, does not occur in normal speed English. The unfamiliarity of the cluster orthographically probably is one of the factors preventing *dva* from being pronounced according to the allegro pattern.

5. Plus juncture is also called "internal open juncture." See Trager and Smith, pp. 37-39 and Martin Joos, "The Definition of Juncture and Terminals" in *Second Texas Conference on Problems of Linguistic Analysis in English* (Austin, Texas: 1962), pp. 4-38.

6. Quoted from Sledd's review of Trager and Smith *(Language,* XXXI [1955], 324) in James H. Sledd, "Notes on English Stress" in *First Texas Conference on Problems of Linguistic Analysis in English* (Austin, Texas: 1962), p. 34.

7. Joos, p. 7. See especially Dwight L. Bolinger, "A Theory of Pitch Accent in English," *Word,* XIV (1958), 109-149. One of Bolinger's conclusions is that, in the domain of stress "one possible kind of phonemic stress is potential for pitch accent," (p. 149). See also the discussion in the *First Texas Conference . . . ,* p. 55 ff.

8. Stanley S. Newman, "On the Stress System of English," *Word,* II (1946) 183 ff. For another possible cause of stress shifts within the word see Bolinger's, "Contrastive Accent and Contrastive Stress," *Language,* XXXVII (1961), 83-96.

9. *Okan'e,* as the failure to have the proper assimilation of voicing, the insertion of [ə] in such forms as *s tobój*→ [sətə'boi̯] (where the /st/ cluster already occurs in English), and many other errors of pronunciation are due to interference caused by the orthographic system of Russian, and not necessarily to interference from English. This has an interesting further consequence: the problems of interference are different depending on whether the learner is repeating a Russian utterance he has heart or pronouncing something he is reading. To illustrate the difference in interference, the Russian /vóru/ "to the thief" will most likely be repeated in the first instance correctly as ['vɔru], while the orthographic *vóru* will most likely be read as ['vɔu̯u].